



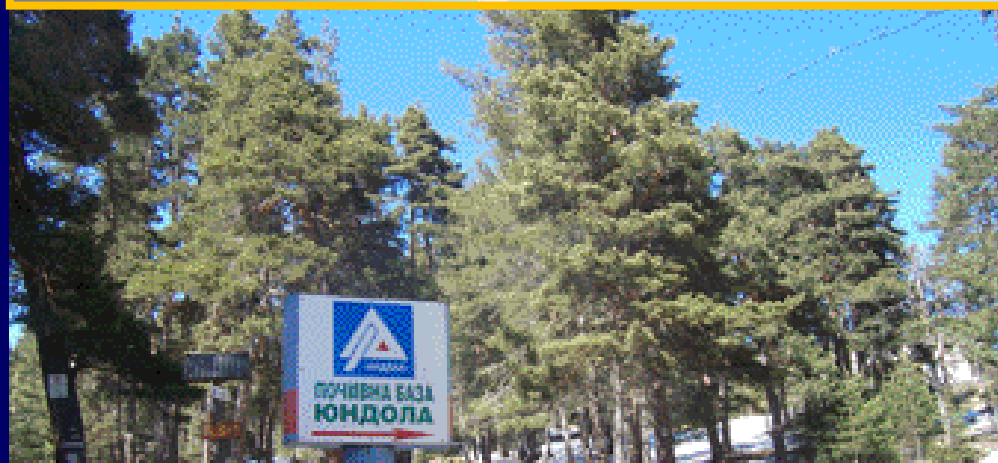
**UNION OF SCIENTISTS IN BULGARIA
BULGARIAN SOCIETY FOR MICROBIOLOGY**

*Twelfth Congress of the Bulgarian Microbiologists
with international participation*

October 11-15, 2010

Yundola, Bulgaria

www.micb-congress12.com



FEMS Activities and FEMS Grants Possibilities

Prof. dr. Vaso Taleski , M.D. Ph.D.
FEMS Grants Secretary



FEMS is...



- the voice of microbiology in Europe
- a network of European microbiologists with worldwide connections
- Europe's connection to microbiology

*46 member societies from 36 European countries,
covering over thirty thousand microbiologists*

Our mission:

TO ADVANCE
AND UNIFY
MICROBIOLOGY
KNOWLEDGE

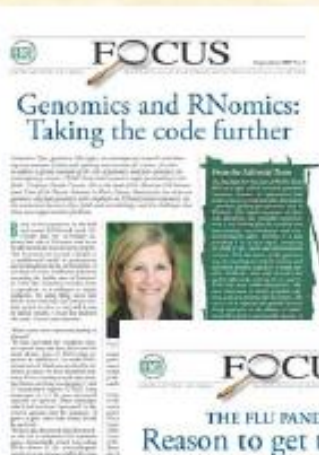


The FEMS Executive Committee

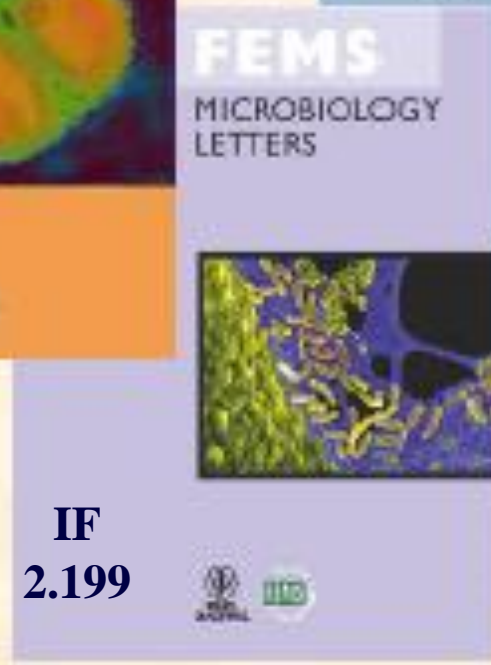
| | | |
|--------------------------------|------------------------|----|
| ■ <u>President:</u> | Bernhard Schink | DE |
| ■ <u>Vice President:</u> | Jean Claude Piffaretti | CH |
| ■ <u>Secretary-General:</u> | Tone Tønjum | NO |
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| ■ <u>Publications Manager:</u> | Fergus Priest | UK |
| ■ <u>Grants Secretary:</u> | Vaso Taleski | MK |
| ■ <u>Member-at-Large:</u> | Hans Wolf | DE |

FEMS publishes...

- 5 Microbiology Journals
- FEMS Affiliates Letter
- FEMS Focus



■ 5 Microbiology Journals



■ FEMS Focus



FOCUS

September 2011

Genomics and RNomics: Taking the code further

Genomics and RNomics are two of the most rapidly advancing fields in molecular biology. The integration of these two fields is leading to a deeper understanding of the genetic code and its role in disease.

Dr. [Name] is a leading expert in the field of genomics and RNomics. Her research has focused on the role of the genetic code in disease, and she has published numerous papers on this topic.



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FOCUS

September 2011

THE FLU PANDEMIC: Reason to get the chills?

The flu pandemic is a real threat, and it is important to understand the risks and how to protect ourselves. This article discusses the latest research on the flu pandemic and the steps we can take to prevent it.



Dr. [Name] is a leading expert in the field of flu research. His research has focused on the role of the flu virus in disease, and he has published numerous papers on this topic.



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FEMS Affiliates Letter





Dear Colleague,
This issue of the Affiliates Letter focuses on the FEMS Research Fellowships which has a deadline on December 1, 2009 and the plans of FEMS for its grants and fellowships.

10% FRF budget goes to YS for research outside Europe

The FEMS Research Fellowships (FRF) are open for applicants until 1 December this year. It calls on working microbiologists who are less than 36 years old. These fellowships are meant to assist young scientists in pursuing their research up to three months in a European country which is different from where he/she lives in. The grants will support the travel and living costs of the fellow.

in handling all types of FEMS grants. We have supported 15 microbiology meetings (EUR146 000), 43 Young scientists with FEMS Research Fellowships (EUR131 100), one visiting scientist (EUR400), one FEMS/ESCMID joint fellowship awardee (EUR1 000) and 25 Young



Grants Secretary
Dr Vaso Taleski

The FRF open twice a year, every December 1st and June 15th of each year. It is only one of the seven activities of the FEMS Grants Board (FGB). Annually, the FGB gives out almost half a million euro's for grants and fellowships, which is one of the core activities of FEMS.



Dr Taleski in action during
the 3rd FEMS Congress

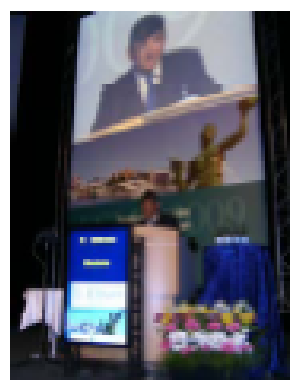
To give you an insight on how the FEMS Grants Board works, FEMS Affiliates Letter interviewed Grants Secretary Vaso Taleski.

FEMS Affiliates Letter (FAL): What are the plans of the FEMS Grants Board in 2010?
Grants Sec. Vaso Taleski (VT): In 2010, we

scientists with FEMS Meeting Attendance Grants (EUR12 000). For the first time in 2009, FEMS Advanced Fellowship (long-term fellowship) was delivered to one extraordinary Young scientist (EUR67 000). In 2009, we have supported 174 European and 21 non-European young scientists to participate at the 3rd FEMS congress in Gothenburg, Sweden (about EUR100 000). The same amount is approved for the forthcoming 4th FEMS Congress.



FAL: What drives you to work hard as a volunteer for grants and fellowships to be given to



Dr Taleski giving
a speech before prizes
are given during
the 3rd FEMS Congress
in Gothenburg, Sweden



2020 January General
On-line Exam

Name of Trip:

ste

FEMS Grants



(budget= 400.000 EUR, 500.000 EUR in Congress year)

- 1. FEMS Meetings Grants (150.000 EUR)**
- 2. FEMS Research Fellowships (120.000 EUR)**
- 3. FEMS Visiting Scientists Grants (5.000 EUR)**
- 4. FEMS-ESCMID Joint Fellowship (1.000 EUR)**
- 5. FEMS Meeting Attendance Grants (20.000 EUR)**
- 6. FEMS Congress Grants (100.000 EUR)**
- 7. FEMS Advanced Fellowships (70.000 EUR)**
- *8. National&Regional Start-up Grants (30.000 EUR)**
- *9. FEMS & ASM Joint fellowship (4.000 EUR)**

1. FEMS Meetings Grants 2010

(Deadline March 1)

- Budget 150.000 EUR
- Maximum 15.000 EUR
- YS (60-80% or 100%), min 250 EUR, max 600 EUR
(Reg. fee 0 – 50%)
- IS (20-40% or 0%), min 400 EUR, max 1000 EUR

NATIONAL / REGIONAL CONGRESSES START-UP GRANTS

Objective

Starting in 2011, FEMS will provide Start-up grants to support National or Regional Microbiological Congresses.

Annual budget for these grants is 30.000 EUR.

Start-up grant can be used by the organizers in any respect that supports successful organization of the meetings.

Minimum of Start-up grant is 1.000 EUR and maximum is 3.000 EUR. The grant amount depends on the number of the society members and expected participants at the congress:

- 50 to 200 participants; 1.000 Euros.
- 200 to 500 participants; 2.000 Euros.
- 500 participants or more; 3.000 Euros.

2. FEMS Research Fellowships

(Deadlines: December 1st, June 15th)

- **Budget = 120.000 EUR;**
- **Grant maximum EUR 4.000**
- **Short term fellowships (1-3 months)**
- **12.000 EUR for research in labs out of Europe**

| 1 | FEMS SOCIETY (lodging application) | | | | | | | | | | | | | |
|----|------------------------------------|---------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|
| 2 | Country | FEMS Society | Name Society | 2006-1 | 2006-2 | 2007-1 | 2007-2 | 2008-1 | 2008-2 | 2009-1 | 2009-2 | 2010-1 | 2010-2 | Total in last 5 years |
| 3 | Armenia | AM-AMS | Armenian Microbiological Society | | | | | 0/0 | 2/2 | 1/1 | 0/0 | 0/1 | 0/0 | 3 |
| 4 | Austria | AT-ÖGHMP | Österreichische Gesellschaft für Hyg, Mikrob und Präy | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1 |
| 5 | Belarus | BY-BSMSMEP | Belar Sci. Med. Soc. Microbiol, Epid.. and Paras. | 1/1 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1 |
| 6 | Belgium | BE-BVM_SBM | Belgische Veren voor Microb / Soc Belge de Microb | 0/0 | 0/0 | 1/1 | 0/0 | 0/0 | 0/0 | 1/1 | 2/2 | 0/0 | 0/0 | 4 |
| 7 | Bulgaria | BG-BSM | Bulgarian Society for Microbiology | 2/5 | 1/1 | 3/3 | 1/1 | 0/0 | 0/0 | 1/1 | 0/0 | 1/2 | 0/0 | 9 |
| 8 | Croatia | HR-CMS | Croatian Microbiology Society | 1/1 | 1/2 | 0/0 | 2/2 | 2/2 | 1/1 | 3/3 | 1/1 | 2/2 | 0/0 | 13 |
| 9 | Czech&Slovak | REG_CZ&SK-CSM | Ceskoslovenská Společnost Mikrobiologická | 2/3 | 1/2 | 3/3 | 2/2 | 3/4 | 1/1 | 2/2 | 0/0 | 2/3 | 2/2 | 18 |
| 10 | Denmark | DK-DMS | Danmarks Mikrobiologiske Selskab | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1/1 | 1 |
| 11 | Estonia | EE-EMS | Eesti Mikrobioloogia Selts | 1/1 | 0/0 | 0/0 | 0/0 | 1/1 | 1/1 | 0/0 | 0/0 | 2/2 | 0/0 | 5 |
| 12 | Finland | FI-SBBMF | Societas Bioch, Biophy et Microbiologica Fenniae | 2/3 | 1/1 | 0/0 | 1/1 | 0/0 | 0/0 | 0/0 | 2/2 | 2/3 | 0/0 | 8 |
| 13 | France | FR-SFM | Société Française de Microbiologie | 2/3 | 0/0 | 0/0 | 1/1 | 0/0 | 0/0 | 0/0 | 1/1 | 0/0 | 1/1 | 5 |
| 14 | Georgia | DE-DGHM | Deutsche Gesellschaft für Hygiene und Mikrobiologie | 0/0 | 1/1 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1 |
| 15 | Germany | DE-VAAM | Vereinigung für Allgemeine und Angewandte Mikrob | 2/3 | 1/1 | 1/1 | 2/2 | 0/0 | 1/1 | 0/0 | 1/1 | 1/1 | 0/0 | 9 |
| 16 | Greece | GR-HSM | Hellenic Society for Microbiology | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0 |
| 17 | Hungary | HU-HSM | Hungarian Society for Microbiology | 2/2 | 1/1 | 1/1 | 2/2 | 2/2 | 1/1 | 1/1 | 2/2 | 2/2 | 1/2 | 15 |
| 18 | Iceland | IS-MSI | Microbiological Society of Iceland | 1/1 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1 |
| 19 | Israel | IL-ISM | Israel Society for Microbiology | 1/1 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1/1 | 2 |
| 20 | Italy | IT-AMCI | Associazione Microbiologi Clinici Italiani | 0/0 | 1/1 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1 |
| 21 | Italy | IT-SIM | Società Italiana di Microbiologia | 0/0 | 1/1 | 0/0 | 1/1 | 0/0 | 0/0 | 0/0 | 2/3 | 1/1 | 1/2 | 6 |
| 22 | Italy | IT-SIV | Italian Society for Virology | 0/1 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1/1 | 0/0 | 0/0 | 1 |
| 23 | Italy | IT-SIMGBM | Società Italiana di Microbiologia General e Biotecnologi | 1/1 | 1/1 | 1/1 | 0/0 | 0/0 | 3/3 | 1/1 | 0/0 | 0/0 | 0/0 | 7 |
| 24 | Latvia | LV-LMB | Latvijas Mikrobiologu Biedriba | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1/1 | 0/0 | 1 |
| 25 | Lithuania | LT-LSMM | Lithuanian Society of Medical Microbiology | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0 |
| 26 | Macedonia | MK-MMS | Macedonian Microbiological Society | 0/0 | 0/0 | 0/0 | 0/0 | 1/1 | 0/0 | 0/0 | 1/1 | 0/0 | 0/0 | 2 |
| 27 | Netherlands | NL-NVvM | Nederlandse Vereniging voor Microbiologie | 0/0 | 0/1 | 0/0 | 1/1 | 0/0 | 1/1 | 0/0 | 0/0 | 0/0 | 0/0 | 2 |
| 28 | Norway | NO-NFM | Norsk Forening for Mikrobiologi | 1/1 | 0/1 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/1 | 1/2 | 0/0 | 2 |
| 29 | Poland | PL-PSM | Polish Society of Microbiologists | 1/1 | 1/2 | 2/2 | 0/0 | 1/1 | 0/0 | 0/0 | 2/2 | 1/1 | 1/1 | 9 |

[illegible]

FEMS Research Fellowships

| Country | FEMS Society | Name Society | 2001-1 | 2001-2 | 2002-1 | 2002-2 | 2003-1 | 2003-2 | 2004-1 | 2004-2 | 2005-1 | 2005-2 | |
|----------|--------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------|
| Bulgaria | BG-BSM | Bulgarian Society for Microbiology | 2\2 | 1\1 | 2\2 | 1\1 | 2\2 | 0\0 | 1\1 | 0\0 | 2\3 | 2\3 | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | 2006-1 | 2006-2 | 2007-1 | 2007-2 | 2008-1 | 2008-2 | 2009-1 | 2009-2 | 2010-1 | 2010-2 | Total 2001-2010 |
| | | | 2\5 | 1\1 | 3\3 | 1\1 | 0\0 | 0\0 | 1\1 | 0\0 | 1\2 | 0\0 | 22 |

> 65.000 EUR



3. FEMS Visiting Scientists Grants *(Deadlines: December 1st, June 15th)*

- **Min. 300 , max. 600 EUR**
- **Budget 5.000 EUR**

3. FEMS Visiting Scientists Grants 2010

- **FEMS provides a limited fund for Visiting Scientist Grants to support special, scientific, microbiology meetings within the European Area (which are not supported with a FEMS Meeting Grant);**
- **One Visiting Scientist Grant can be awarded for one outstanding European scientist per meeting. The Visiting Scientist cannot be from the same country where the meeting takes place;**
- **Visiting scientists grants Regulations are available at FEMS web.**

4. FEMS / ESCMID Joint Fellowships (EUR 1.000)



- **Best candidate from FRF round-1**

4. FEMS / ESCMID Joint Fellowships 2010

(EUR + 1.000, 2010 FEMS fellows)

FEMS fellow:

- **David P. Fewer**, Department of Applied Chemistry and Microbiology, Viikki Biocenter, University of Helsinki , Finland
- He has published 21 scientific papers in 16 international journals **since 2002**.
- **Research project:** “Mining the *Nodularia spumigena* genome for new natural products and genes encoding biosynthetic pathways”.

Host Laboratory:

Prof. Enrique Flores, Instituto de Bioquímica Vegetal y Fotosíntesis, University of Seville , Avda. Sevilla , Spain

4. FEMS / ESCMID Joint Fellowships 2010

ESCMID fellow:

- **Corine Geurts van Kessel**, MD PhD, Principal investigator, Department of Virology, Erasmus MC Rotterdam, the Netherlands
- **Hosting Institute:** Laboratory of Immunoregulation, University Hospital of Ghent, Belgium
- **Research project:** The role of dendritic cells in bronchus associated lymphoid tissue formation following influenza virus infection



Dear Colleague,
Meet the awardees of this year's FEMS-ESCMID joint fellowship.



FEMS-ESCMID joint fellowship awardees for 2010, selected

GRANTS
DEADLINES
[FEMS Advanced Fellowship](#)
October 1, 2010



David P. Fewer
M.Sc. Ph. D.
was
chosen for
the next
FEMS-ESCMID

side of FEMS.

David P. Fewer

The 35-year-old microbiologist from Ireland and currently the Department of Applied and Microbiology at the University of Helsinki.

He has published 21 scientific papers in 16 international journals since 2002. These papers have been cited 190 times with an average citation of 10.94 per article.

Fewer's research is titled, "Mining the *Nodularia spumigena* genome for new natural products and genes encoding biosynthetic pathways."

The completion of his research will involve a stay in the laboratory of Prof. Enrique Flores at the University of Seville in Spain. Prof. Flores is one of the foremost cyanobacterial molecular biologists of our time.

To represent ESCMID, Corine Geurts van Kessel MD Ph. D. was selected. Geurts van Kessel hails from The Netherlands and is currently a medical specialist training in medical microbiology-virology at the Erasmus University Medical Center in Rotterdam, The Netherlands.

Beyond her vast experience in Virology in and out of medical school, she also boasts of an extensive international experience. Dr. Geurts van Kessel has served in hospitals in Nepal, Thailand, France and Belgium.

Her research is titled, "The role of dendritic cells in bronchus associated lymphoid tissue formation following influenza virus infections."

The main objective of her project is to identify the mechanism by which dendritic cells



Corine Geurts van Kessel

Salmonella: from Basic
Science to Clinical Issues

Villars-sur-Ollon
Switzerland
3 - 7 October 2010



FEMS



5. FEMS Meeting Attendance Grants

(Deadlines April 1st, September 1st)

- Budget = EUR 20.000;
- Grant maximum EUR 600, minimum EUR 250;
- >2010 \ 45 grantees \ 18.300 EUR

7. FEMS Advanced Fellowship

(long term fellowship, 6-24 months)

(budget = 70.000 EUR)

(deadline 1st October 2010)



- 2007 - 5 candidates (not selected)
- 2008 - 4 candidates (selected: Ruth Serra Moreno, Spain, excellent candidate, canceled she accepted post-doc position at Harvard)
- 2009, 5 candidates (1 selected)
- 2010, 9 candidates (2 selected)
- 2011, 19 candidates (?)



FEMS Advanced Fellowship 2009

- **Stephanie Matrat, PhD, from France,**
- **Host lab: Universidad Complutense de Madrid, Spain;**
- **Project title: Investigating the genetic networks involved in the commensalism/virulence transition in *Enterococcus faecalis*;**
- **EUR 67.000, for 24 months research;**



FEMS Advanced Fellowship 2010

Celia Murciano, 24 months = 41.000 EUR.

Department of Microbiology and Ecology,
University of Valencia, Faculty of Biological Sciences, Burjassot,
Valencia, Spain,

Project title: “ Epithelial protection mechanisms against mucosal
fungal pathogens,

Host lab: Department of Oral Immunology, King's College
London, United Kingdom



FEMS Advanced Fellowship 2010

- **Cinzia Borgogna** University of Piemonte Orientale "A. Avogadro" , Novara, Italy,
- 12 months = 20.800 EUR
- Project title: "Epidermodysplasia verruciformis as a human model to elucidate beta-papillomavirus life cycle and their role in skin cancer development".
- Host lab: National Institute for Medical Research
The Ridgeway, Mill Hill, London, United Kingdom

6. FEMS Congress Grants

- **Budget 100.000 EUR**
- **Grants of 400, 500 and 600 EUR**
- **Special registration fee of EUR 350**

6. FEMS Congress Grants 2011

Geneva, Switzerland

- **Total budget 100.000 EUR;**
- **The amounts of the grants 400, 500 and 600 EUR;**
- **Special registration fee of EUR 350;**
- **Five best papers awards (EUR 500 each);**
- **Special reception for all grantees;**
- **Regulations and application for online;**
- **Deadline January 2011.**

HOME | CONTACT US | KEEP ME UPDATED | TELL A FRIEND | ADD TO FAVORITES

FEMS 4th Congress of European Microbiologists
FEMS 2011
 Geneva, Switzerland June 26-30, 2011

Congress Information Scientific Information Registration Accommodation

Advancing Knowledge

The 4th Congress of European Microbiologists will provide information on microbiology between key fields, and microbiology congress Societies (FEMS), will welcome professionals to advance the world of microbiology.

REGISTRATION **PRELIMINARY TIMETABLE** **SUBMIT YOUR ABSTRACT**

Register Now Get a Glimpse More Info



Scientific Information

Committees

Congress Topics

Speakers

Meet the Plenary Speakers

Preliminary Timetable

Symposia and Workshops

Call for Abstracts

FEMS Congress Grants for Young Scientists



FEMS CONGRESS GRANTS FOR YOUNG SCIENTISTS

Deadline for submission of application for grants: January 14, 2011

FEMS provides approximately 200 grants for **European Young Scientists** to support their attendance at the 4th FEMS Congress of European Microbiologists, June 26-30, 2011, Geneva, Switzerland.

About 20 grants are provided to support **non-European Young Scientists**.

The amounts of the Grants are 400, 500 or 600 EURO (depending on the track).

A special FEMS Congress Award (including a Certificate and an additional 500 EURO) will be awarded to the best presented papers.

FEMS will organize a special Reception for all grantees. Further details will be available on the website.

REGULATIONS

A young scientist applying for a FEMS Congress Grant should be:

- A member of a FEMS Member Society, at least one year before Congress takes place (for European Young Scientists);
- Younger than 36 years of age at the closing date of the Congress;
- A working microbiologist;
- The first author of an accepted abstract and attend the Congress;
- Recommended by a member of a FEMS member society (for European Young Scientists), or other senior scientists (for non-European Young Scientists);
- Pay a registration fee after information on grant approval (this is at a special rate of 350 EURO).
- Only grantees that are present at the Congress will receive a grant.

Application form

[Click here to apply for a grant](#)



| CONGRESS GRANTEES-2009 | EUROPEAN | NON-EUROPEAN | TOTAL |
|---------------------------|----------|--------------|-------|
| AWARDED | 174 | 21 | 195 |
| REJECTED | 72 | 17 | 89 |
| TOTAL | 246 | 38 | 284 |

Only 1 from Bulgaria



BIOTIC BIFIDOBACTERIA FOR CALVES

...a E., Grmanova M., Rada V., Homutova L., Dubna S.

...rition and Dietetics, Faculty of Agrobiology, Food and Natural Resources,
...niversity of Life Sciences Prague, Czech Republic

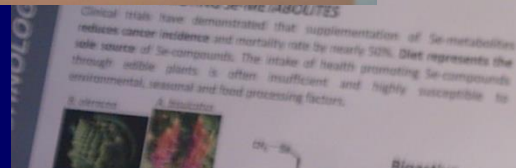
...a in reducing disease in humans
...apparent that the composition of
...tion and in resistance to...



Synthesis of bioactive seleno-metabolites in *Saccharomyces cerevisiae*

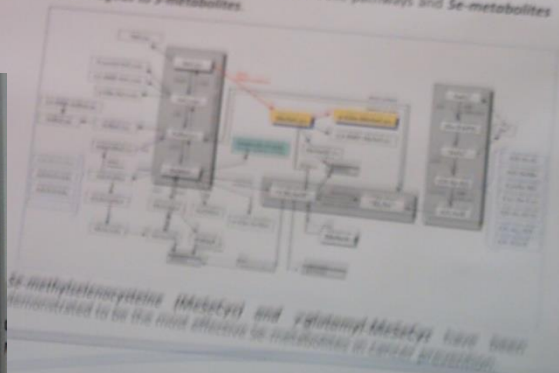
...er R. Hillebrand¹, Christian Thöni¹, Erik H. Larsen² and Lisbeth Olsson¹

...ical Engineering Dept. - Chalmers University of Technology, Göteborg, Sweden
...ne, Food Chemistry Dept. - Technical University of Denmark, Søborg, Denmark



METABOLISM of SELENIUM in YEAST

Sulphur (S) and selenium (Se) have very similar physical and chemical properties. S and Se follow the same metabolic pathways and Se-metabolites are analogous to S-metabolites.



Cold adaptation in *Bacillus subtilis* under anaerobic conditions

Jana Beranová^{1*}, María Cecilia Mansilla², Diego de Mendoza² and Ivo Konopásek¹

¹Dept. of Genetics and Microbiology, Faculty of Science, Charles University, Prague, Czech Republic; *beranov2@natur.cuni.cz

²Departamento de Microbiología, Facultad de Ciencias Bioquímicas y Farmacéuticas, Instituto de Biología Molecular y Celular de Rosario, Universidad Nacional de Rosario, Rosario, Argentina

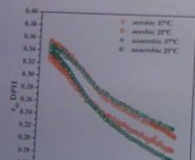
Introduction

The model bacterium *Bacillus subtilis* is the upper limit of soil flora, the bacterium is oxygen available mostly used by the changing most constant in contrast together with the temperature changes. Even though *B. subtilis* is not generally considered to be obligate aerobic, several recent studies have proved that the bacterium is in fact a facultative anaerobe, capable of both fermentation and anaerobic respiration with either nitrate or nitrite used as a terminal electron acceptor [1, 2]. In the absence of alternative terminal electron acceptors, *B. subtilis* can also grow by fermentation, using mixed acid/branched pathway [3, 4].

A decrease in ambient temperature brings about several problems the cell has to cope with. One of them is the modulation of membrane fluidity that prevents the membrane to function properly. *B. subtilis* cells use two distinct ways to adapt to low temperatures. The long-term membrane adaptation employs an increase in the number of branched fatty acids (mostly a 20:0 and a 22:0) that effectively fluidifies the membrane [5, 6]. Short-term adaptation of membrane phospholipids [6, 7]. The induction of this response is regulated by a two-component system consisting of sensor kinase (Dsk) and the response regulator (Drr) [7]. Transcription of *dsk* is induced by the increase in membrane rigidity and is mediated by the increase in membrane fluidity [8]. Transcription of *drr* is induced by the presence of branched fatty acid precursors or by unsaturated fatty acids (20:0) in medium [9].

We compared both long- and short-term adaptation to cold under aerobic and anaerobic conditions. Anaerobiosis was supposed to prevent Dsk activity and to alter the physiological response.

2. The extent of the membrane adaptation at the level of membrane fluidity



Anaerobic cells were able to fluidify their membrane similarly to aerobic cells more than the ones cultured under aerobic conditions.

1. The proportion of fluidizing species of fatty acids in *B. subtilis* membrane under different temperature and oxygen conditions

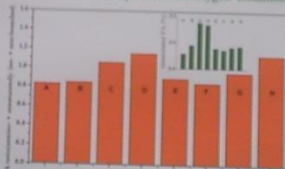


Fig. 1 The effect of anaerobic respiration on the cold adaptation in the level of membrane fatty acid in *B. subtilis*. MB21 cells were grown aerobically or anaerobically at temperatures of 37 °C, 25 °C, and 20 °C, and harvested in the mid-log phase for lipid isolation and fatty acid analysis. Fatty acid samples were analyzed by GC-MS. The results are shown as the mean ± SD. The data were analyzed by ANOVA. * indicates significant differences between aerobic and anaerobic cells at the same temperature. ** indicates significant differences between aerobic and anaerobic cells at different temperatures. *** indicates significant differences between aerobic and anaerobic cells at different temperatures and oxygen conditions.

Conclusions

Under anaerobic conditions:

- ... the membrane adaptation to low temperatures in *Bacillus subtilis* is mediated by the increase of fluidizing (mostly anteiso-branched) fatty acid species similarly to aerobic conditions.

- **A very successful reception for the FEMS grantees – will be traditional**
- **Names of all grantees were published on special page of the Congress Program Book.**











1st FEMS Congress of European Microbiologists

Dates: 2003 June 29 - 2003 July 3

Venue: Cankarjev Dom Ljubljana, SLOVENIA

2nd FEMS Congress of European Microbiologists

Integrating Microbial Knowledge into Human Life

2006 July 4 - 8

Madrid, SPAIN

3rd FEMS Congress of European Microbiologists

Microbes and Man: Interdependence and Future Challenges

2009 June 28 – July 2

Göteborg Convention Centre, Göteborg, SWEDEN

4th CONGRESS OF EUROPEAN MICROBIOLOGISTS
Geneva, Switzerland, June 26-30, 2011



4th Congress of European Microbiologists

FEMS 2011

Geneva, Switzerland June 26-30, 2011



Congress Information

Scientific Information

Registration

Accommodation

Sponsorship and Exhibition

Useful Links



Advancing Knowledge on Microbes

The 4th Congress of European Microbiologists offers professionals the latest information on microbiology, an in-depth understanding of the interdependence between key fields, and a chance to discuss solutions to future challenges. This microbiology congress, organized by The Federation of European Microbiological Societies (FEMS), will take place in Geneva, Switzerland, June 26-30, 2011. We welcome professionals in the field to register, submit their abstracts, and help advance the world of microbes!



Important notes:

- Visit FEMS Grants website: www.fems-microbiology.org;
- Apply on time;
- See you at the 4th FEMS Congress in Geneva, 2011.

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**Wish You a great & successful
12th Congress**